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ABSTRACT

The St. John Valley Bilingual Education Project (Project VIBE) has undertaken the multidisciplinary French/English bilingual education of public school students in Madawaska, a Maine community near the Canadian border. The present report represents a complete description of this Title VII program, covering program development, staffing and management, parent and community involvement, program costs, and a summary of evaluating reports. A description of the course of instruction includes: (1) the rationale for determining the language of instruction for each subject: (2) an excerpt from the French curriculum guide: (3) classroom grouping techniques: (4) methods of diagnosis and assessment: (5) a suggested weekly schedule: and (6) discussions of facilities, equipment, and key materials. Sources for further information about the project are appended. (JB)

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ST. JOHN VALLEY

BILINGUAL EDUCATION PROJECT

MADAWASKA, MAINE

Prepared for

the

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education
Office of Planning, Budgeting, and Evaluation

Under Contract No. OEC-0-74-9331

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American Institutes for Research
in the Behavioral Sciences

Palo Alto, California

August 1975

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We are grateful to the director and staff of the St. John Valley Bilingual Education Project who generously gave their time to answer questions from AIR site visitors. They extended a special kind of hospitality and spared no amount of effort to provide the information needed to prepare this description. The teachers and children, too, made the AIR site visit team feel welcome and provided an opportunity to see the program in action.

ABOUT THE COVER: The design on the cover is reproduced, with permission, from L'Amérique du Nord: Son Economie et Ses Ressources, a project-developed booklet from the French social studies curriculum for grade 5. Taken from a woodcut, the design is reminiscent of the small towns of northern Maine that are served by the St. John Valley Bilingual Education Project.

FOREWORD

This program description was prepared as part of a study conducted by the American Institutes for Research (AIR) under contract to the U.S. Office of Education. The purpose of the study was to recommend to the Joint Dissemination Review Panel (DRP) of the Education Division, Department of Health, Education, and Welfare, exemplary bilingual education programs and to prepare descriptions of the programs that the DRP approved for dissemination.

The criteria established for screening programs in this study intentionally limited choices to those in which approaches were consistent with Title VII legislation and definitions. In addition, to be defined as exemplary, a program had to demonstrate significantly improved student outcomes and to meet other criteria for dissemination. For example, close attention was given to the soundness of evidence presented in local evaluation reports. A minimum requirement for this evidence of effectiveness was that some baseline or comparison be provided so that gains made by the program students could be clearly attributed to the impact of the bilingual program. Further, per-pupil costs and instructional and management procedures were examined, but only after confidence in the evidence of effectiveness was established.

This description was prepared for one of the programs that passed review both by AIR and the DRP. It describes one locale's way of successfully meeting the needs of children who came to school with little or no ability to communicate in English. Although the program developed in response to local problems, other school districts with similar needs may wish to adapt parts or all of it according to their own circumstances and philosophy.

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PROGRAM OVERVIEW

The St. John Valley Bilingual Education Project operates in three cooperating school districts in northeastern Maine, serving the towns of Madawaska, Frenchville, St. Agatha, and Van Buren. Established in 1970 under Title VII, the program was designed to serve students in an area where two languages exist side by side--English and French. The Valley of the St. John River was originally settled by the French-speaking Acadians, and today the river forms the border between the United States and Canada, so that both historical and geographical influences have produced a bilingual society.

Local educators, who had long recognized the need of the children for bilingual capabilities, immediately took advantage of the opportunity to obtain a developmental grant under Title VII in early 1970. They established a project whose 5-year goals were stated as follows:

- Students will be able to use English to a higher proficiency than before the onset of the project.
- Students will have proficiency in using French as a tool for learning.
- Students will understand and be proud of their Canadian-Acadian heritage.

Designed as a supplement to the regular curriculum, the bilingual program added a French element which was completely new, and also added some new elements to the English curriculum, primarily a greater emphasis on speaking and vocabulary building. Thus, children now have certain basic skills and concepts of the regular curriculum presented to them through the medium of two languages, plus a special series of topics in French which relate to their cultural background.

Despite some differences in curriculum, staffing, and facilities among the three districts, all bilingual program classrooms share two basic and essential characteristics. First, they use a sequence of instructional objectives developed and refined by the teachers for each grade level over the years of program operation. Second, they use standard procedures for evaluating achievement of these objectives. The evaluator visits all classrooms frequently to guide and consult with the teachers in assessing student achievement; this helps to maintain uniformity across schools.

In addition to the uniform objectives and evaluation procedures, the program has developed a special series of French curriculum materials, which

supplement the English language curriculum by providing instruction geared to the experiences of children in an isolated rural area where two languages are spoken. The content areas addressed through French instruction include mathematics, music, art, social studies, and language skills. The suggested time allotment for bilingual education is for two-thirds of the instruction to take place in English, one-third in French.

In its fourth year, 1973-74, the program served 768 children in grades K through 5. They came from farms and small towns along the river in a rural area where the major activity is potato farming. On the other side of the river is the French-speaking area of the Canadian province of New Brunswick. There is much commerce, social interaction, and intermarriage between the Canadian and American communities, and the Acadian heritage remains a vital influence in the area. Many children come to school speaking French better than English, and poorly prepared for school in either language. Although the three districts have different selection procedures, the language dominance of students is not considered in choosing the participants for the program; therefore, students are either monolingual English, monolingual French, or bilingual.

The project staff included the following: one full-time project director who had experience both as a teacher and principal; one full-time curriculum coordinator who had a master's degree and teaching experience; one full-time evaluator who had a bachelor's degree plus graduate work and attendance at numerous institutes on evaluation; one part-time French consultant who had a doctoral degree and was experienced in teaching and curriculum development in French; 36 full-time certificated teachers; and 22 full-time teacher aides, many of whom were working toward a bachelor's degree in education. All but a few of the staff members were bilingual.

PROGRAM DEVELOPMENT

Background

Locale

Located at the northernmost part of Maine, the St. John Valley takes its name from the river which separates the state of Maine and the Canadian province of New Brunswick. The communities served by the program are small towns in a rural area where the major activity is potato farming. Throughout the valley each American community is matched by a French-speaking Canadian one on the other side of the river. In Madawaska, the largest of the American towns, the primary industry is a paper mill, which processes wood pulp pumped across the river from the town of Edmundston, Canada. The area is isolated by distance from major American and Canadian industrial and social centers; it lies 200 miles from the Bangor central Maine area and 170 miles from Quebec City. Before the boundaries were drawn this was the area settled by the French-speaking Acadians. There is much commerce, social interaction, and intermarriage (estimated at over 50 percent) between the Canadian and American communities, and the Acadian heritage remains a vital influence in the area.

Because of its isolated rural character, its French-speaking heritage, and its proximity to French-speaking Canada, the valley has remained a truly bilingual area, where many people still speak French at home and use both languages in their daily lives. Many children come to school speaking French better than English, and poorly prepared for school in either language.

Participants

The program served three school districts, which included approximately 75 percent of the total valley population. These districts were S.A.D. #33 serving the towns of Frenchville and St. Agatha, S.A.D. #24 serving the town of Van Buren, and the Madawaska school district. In the eight elementary schools in the three participating districts, the project included approximately 60 percent of the target population. It operated alongside other special programs such as Follow Through, and children sometimes have been included in both.

When it began in 1970-71, the program served grades K and 1; there were 91 children included in S.A.D. #33, 102 in Madawaska, and 74 in S.A.D. #24. By 1973-74, grades K through 4 were included, with 245 children in S.A.D. #33, 300 in Madawaska, and 223 in S.A.D. #24--a total of 768 pupils.

Students who participated in the program were selected differently in the three districts. In S.A.D. #33 (Frenchville), all kindergarten students in one school were part of the program. In Madawaska, entering kindergarten students whose parents volunteered to have them participate in the bilingual program were selected. In S.A.D. #24 (Van Buren), students were randomly assigned to the various teachers, and those assigned to the teachers participating in the bilingual program became program students. In all three districts, language dominance of students was not considered in choosing program participants, so there was a mixture of English dominant, French dominant, and bilingual.

History

The St. John Valley Bilingual Program originated out of a long-standing recognition by educators in this isolated bilingual area that students needed a special approach to English instruction, since many of them were French speaking, and that they could benefit from attaining proficiency in two languages, since local life depended on them both. When Title VII made funds available for bilingual education, they applied for a developmental grant. One of their primary concerns was with developing a program that would be responsive to the cultural background of the population. Prior to 1970, studies made by guidance staff and supervisors in the area had shown that students in the schools were performing rather poorly, and many felt that it was because education did not respond to the students' image of themselves and their world. The content of published materials was often totally unfamiliar to the children, whose experiential situations were limited to those of a rural area and often to a cultural background more French than English.

Philosophy and Goals

The basic philosophy of the bilingual program was that it should supplement the existing program and assist the community in meeting their linguistic, cultural, social, and economic needs for bilingual skills. It was not viewed primarily as a language program, but contained language only as a medium of instruction for the life the students would encounter.

Since it was designed as a supplement to the regular curriculum, the bilingual program did not represent a great change in the English curriculum, but rather a new approach to all instruction. It added a French element which was completely new, and also added some new elements to the English curriculum, primarily a greater emphasis on speaking and vocabulary building. The curriculum in French was based upon objectives developed and refined by the teachers for each grade level as the program expanded upward. The regular curriculum in English differed among the three school districts; but like

the French curriculum, the supplementary English curriculum developed as a result of the bilingual program was based upon specific objectives accompanied by suggested activities which were student-task-centered rather than teacher-centered. In both areas, achievement of each objective was measured by the teacher, either using locally developed criterion tests or through her own observation. To help maintain uniformity of program processes across schools, the evaluator visited all classrooms frequently to guide and consult with the teachers in assessing student achievement. The feedback from teachers and their involvement and responsibility for the curriculum and objectives were important characteristics of the program.

Program Planning

The development grant under Title VII was received in 1970. During the period of planning which preceded implementation, district personnel had considered several possible approaches to the design of the Title VII program. One put the emphasis on acquiring new materials and equipment; another stressed a programmatic approach, developing a new curriculum. Eventually, the latter course was chosen, although project staff felt a continuing need during the early years of the project to reiterate that the addition of materials and equipment was not the most important aspect of Title VII, but rather had to be viewed as part of the effort to create a curriculum uniquely suited to the bilingual population.

Materials Development

In the first year of funding a strategy was developed for the entire 5-year period, identifying the content areas to be treated and the cultural context of the students. Kindergarten and first-grade classes were included in the program during that year, which was one of organizing, searching for materials, for inservice programs, and for knowledge from other programs in the country. During the first, 1971, an intensive developmental effort began which has been repeated in each subsequent year. A team of 12 teachers and consultants worked with the Title VII curriculum specialist to produce materials for the classrooms. Three members of the University of Maine at Fort Kent contributed to the series of booklets for the French curriculum. In addition, visual aids, discussion posters, language master cards, and cassette recordings of French songs were produced, all keyed to the overall program curriculum design.

Staff Development

Staff development paralleled materials development as a major activity from the earliest days of the program. The teachers who participated were

all present in the districts; no special hiring of teachers was done for the bilingual program. Aides were hired from Title VII funds; these were all bilingual members of the community who were interested in working toward a career in education. Preservice training had been planned for all instructional staff, but delays in funding caused the program to start late, and preservice training was not carried out. Both teachers and aides participated in inservice training workshops held throughout the year. All the topics were suggested by teachers, teacher aides, principals, and supervisors. During the first year the subjects treated in these workshops included classroom activities pertaining to Acadian history, discussion of the type of French to be used as the language of instruction, strategies for implementing the design for evaluation of student learning, staff roles and needs in the program, behavioral objectives, available French materials, and processes of learning. A more detailed discussion of staff training appears in the chapter, Staffing and Management.

Comprehensive Evaluation Plan

In addition to staff and materials development, one of the most important components of the program plan was the evaluation. When the program was first initiated, a comprehensive design for evaluation was formulated and a full-time evaluator was included as a permanent member of the staff. The services of a consulting firm specializing in educational evaluation were also obtained; this group was responsible for much of the data analysis and for training and support services provided to the evaluator. Although the firm continued its involvement as an adviser, its role diminished over the years as the staff evaluator took increasing responsibility for all evaluation activities.

Evaluation during each program year included final measurement of students' cognitive achievement (discussed in the chapter, Evaluation), and also a comprehensive process evaluation (discussed in the chapter, Staffing and Management, under the section on Management Strategies).

STAFFING AND MANAGEMENT

Roles and Responsibilities of Program Staff

During 1973-74, the program staff included the following personnel.

Project Director (full-time)

The project director was a native of the St. John Valley area, bilingual, and had experience as both teacher and principal in the local schools. He was responsible for the overall management of program activities toward the stated goals, the fiscal accounting of project funds, contracting and hiring staff with approval from the Board of Directors, coordinating community participation, and disseminating project information.

Curriculum Coordinator (full-time)

The curriculum coordinator had a master's degree and experience in teaching and curriculum planning. Her responsibilities included planning with the project teachers supplementary curriculum units in all content areas except French, implementing training programs for teachers and parents in these areas, visiting classrooms for observation and consultation with teachers, and coordinating project activities within the community (such as parent meetings, the parent volunteer program, or contributions to the newsletter) wherever these were related to content areas.

French Consultant (part-time)

A resident of the St. John Valley area, the French consultant had a doctoral degree, experience in teaching at both the school and university levels, and experience in curriculum development. He prepared French curriculum materials for the program, coordinated a training program in French for teachers and parents that focused on French instruction in the program, and visited classrooms to observe and consult with teachers.

Evaluator (full-time)

The evaluator was also bilingual and a native of the area. He had experience teaching both French and Acadian history, and had done graduate work and attended several institutes on evaluation. His work included programming teacher activities in planning and implementing educational objectives, providing for evaluation techniques to be integrated into the bilingual education curriculum, coordinating an evaluation training program for teachers and parents (focused on Title VII evaluation procedures, standardized testing, and

classroom management), and producing interim and final evaluation reports.

Teachers (36, full-time)

The teachers, 96 percent of whom were bilingual, were not recruited especially for the program, but were already in the three districts when it began. They were selected to teach in the program on the basis of their interest in bilingual education; all were volunteers. The teachers were responsible for two primary features of the bilingual program: the use of the program's instructional objectives as a guide to each pupil's learning, and the evaluation of each pupil's achievement of the objectives.

Although it was not mandatory, all teachers generally used the program's curriculum materials in French. Staff members attributed the success of the program in its supplementary role to the fact that it filled gaps in the regular curriculum, and to the origin of its objectives and materials with the teachers themselves. Since the program's beginning, they have been involved in the development of both, working closely with the curriculum coordinator and French consultant. Groups of volunteer teachers have worked together to edit and compile all the objectives and materials that have been developed for the project.

The teachers also worked closely with their aides, setting up a cooperative pattern for management of the classroom and sequencing of instruction in the two languages. Inservice training sessions attended by both teachers and aides focused specifically on this area. Aside from the use of the objectives and evaluative procedures, however, teachers were left free to operate in accordance with their own teaching style, and to work out with their aides the best system of coordination in the classroom. The use of aides, in fact, was not required, and although all teachers in grades K through 3 had them, some grade 4 teachers opted not to use aides.

Aides (22, full-time)

The aides were bilingual members of the community who were interested in working toward a degree in education. Through the project, some participated in a degree program at the University of Maine at Fort Kent. In addition, all training provided for teachers was also for the aides; they attended the inservice courses together. The aides spent full time in the classroom, and performed any of the instructional activities of a teacher, depending on the system a particular teacher and aide worked out.

Staff Recruitment and Growth

Since the teachers were already employed by the local districts and aides were hired by the school district, the only recruitment done by the Title VII program was hiring program administrative staff. The program director was a principal in S.A.D. #33, the evaluator and curriculum coordinator were teachers, and the French consultant was on the staff of the University of Maine at Fort Kent. All these people had worked closely together and with the local school administrators in the original needs assessment and planning for the program.

Over the years there were few changes of personnel, although the staffing pattern changed in accordance with the program's growth. Attrition among the instructional staff was minimal; perhaps as many as five individuals left the program. This stability reflected that of the area as a whole, and was also seen in the student body.

Some changes in program staffing occurred after the 1973-74 school year. With the 5-year Title VII funding due to end, moves were gradually made to shift responsibility for support of the bilingual program to the three districts. The program director returned to a principalship, and the French consultant took over the combined duties of program director and coordinator of the program in French. The evaluator also took on the role of assistant director to help with the administrative load. Additional teachers in each district were included every year as the program moved up through the grades, as well as additional aides, whose salaries were increasingly picked up by the districts.

Preservice and Inservice Training

Preservice and inservice training sessions were an important part of the program plans since the beginning. Preservice training was aimed at acquainting the teachers and aides with the goals and methods of bilingual education, helping them to define their own objectives as members of the program, and enabling them to understand and explain Title VII to others. Preservice training workshops were planned for the first year of the program, but because of the late start they were not carried out. Instead, early in the fall, teachers, aides, and principals participated in a needs assessment and staff involvement workshop in which they discussed the kind of cooperation needed to make the program work successfully. In each subsequent year, preservice workshops were held for the new teachers entering the program with the addition of a higher grade level. In 1973-74, for example, all new teachers participated in a 1-week summer institute on increasing French language competency.

Inservice training sessions were numerous and, although voluntary, were attended by 85 percent of the teaching staff. The following types of activities were included in the inservice program.

Inservice Courses

These were conducted by staff members of the University of Maine at Fort Kent and provided academic credit for the teachers and principals who participated. In 1973-74, one course was on curriculum design and sequencing, and dealt with the areas of mathematics, science, and social studies, emphasizing new teaching techniques to encourage more student involvement in the learning process. Another course was on advanced oral and written French.

Workshops

Various guest instructors from universities, staff from other programs, materials developers, and members of the Title VII staff conducted the workshops, which related to classroom concerns of teachers and aides; the topics had all been suggested by teachers, aides, principals, or supervisors. Topics treated since the first year included use of the French materials developed by the program, use of cuisenaire rods, the evaluation design, discussion of conferences attended by staff members, behavioral objectives, demonstrations of methods developed by teachers in the bilingual classrooms, videotaping and micro-teaching, and the program-developed English Guide.

Summer Institutes

At these institutes, teachers and staff members gathered to discuss aspects of the bilingual program and to develop new supplementary French materials for the grade level being added to the program in the fall.

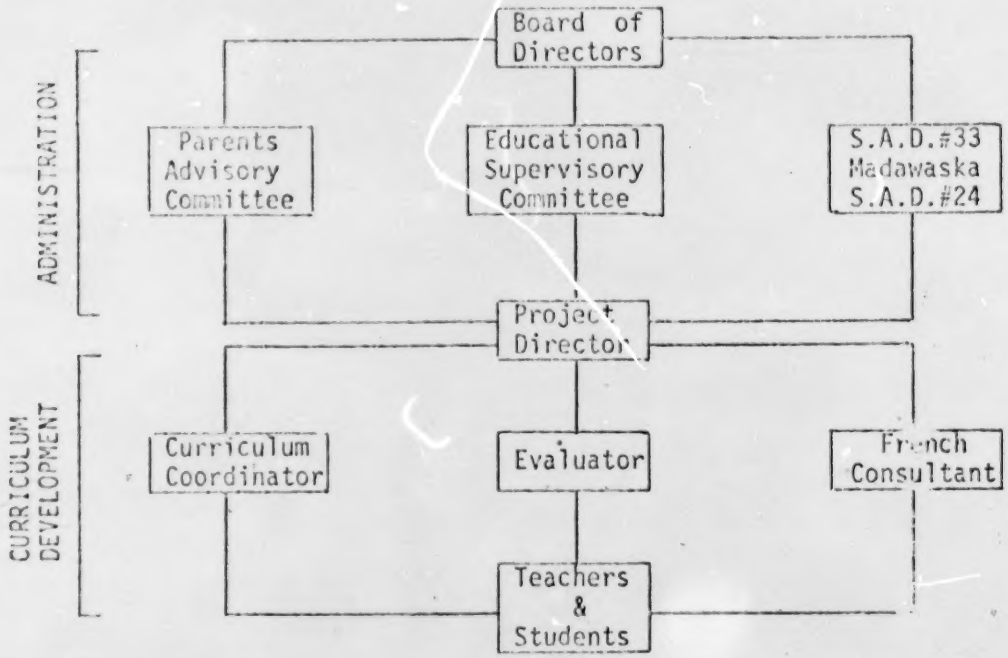
Visits to Other Systems and Conferences

Teachers were encouraged to visit and observe bilingual education programs operating in other school systems. Attendance at appropriate conferences was also an important activity for program staff and teachers; reports on what they had learned were included in inservice workshops. Among the conferences attended were the International Conference on Bilingual-Bicultural Education, the New England Council of Teachers of English Conference, the TESOL Conference, the International Reading Association Convention, and the North American French Bilingual Conference.

Management Strategies

The project director coordinated the program-related activities of the staff, including principals and teachers in the participating schools. To keep the lines of communication open with these personnel in the three participating districts, the director made periodic visits to the various schools. The Title VII staff, particularly the evaluator and curriculum coordinator, maintained a close working relationship with the instructional staff in the schools, but district autonomy was preserved in all curriculum and management areas which did not fall directly under the bilingual program.

Within the bilingual program, the overall management structure might be represented as follows:

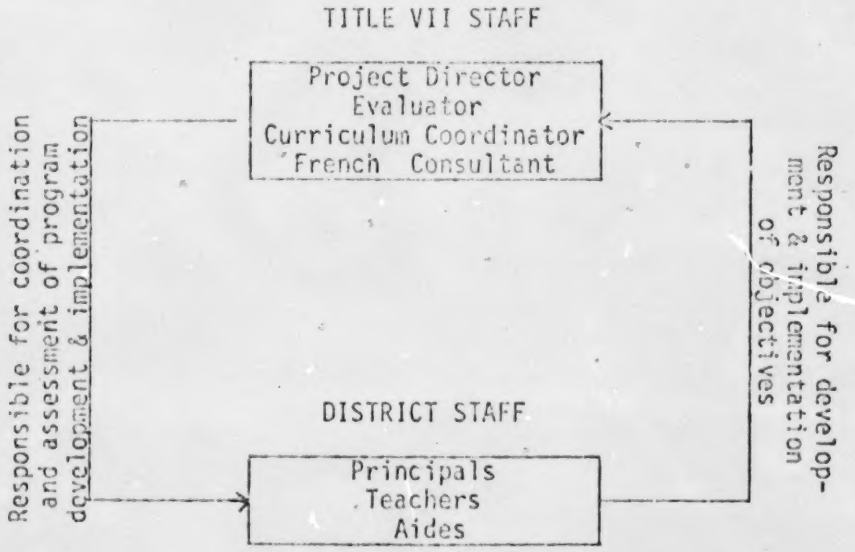


The top half of the chart shows the program's administrative structure, which includes the Board of Directors and the Educational Supervisory Committee, two composite bodies drawn from the various groups participating in the program.

The Board of Directors was made up of two directors from each school system, the superintendent from each school system, and a representative from the University of Maine at Fort Kent. Only the six directors had the right to vote. The primary responsibility of the Board was to oversee and approve program expenditures at their monthly meetings through the Finance Committee, which they elected, and by their review of all yearly continuing proposals. They also advised the project staff of individual school district policies and assisted in determining procedures to assure continuation of the program.

One major innovation introduced by the board in 1973 was the creation of the Educational Supervisory Committee, made up of all principals and supervisors of buildings that had bilingual program activities. The committee met seven times a year to discuss evaluation procedures and schedules, workshop and institute needs, equipment and materials usage, and program activities within their respective schools. They also provided the project staff with suggestions to incorporate successful activities of individual teachers into classroom programming in the areas of student learning centers, small-group peer instruction, diagnosis of student needs, and prescription of appropriate instructional activities.

The lower half of the chart shows the persons directly involved in managing curriculum development and program implementation activities, which can be represented more simply by the following diagram:



As the diagram indicates, the role of the Title VII staff members was to facilitate and coordinate the development of objectives and materials and to evaluate the implementation and results of the program. The role of the school staff was to help develop objectives and materials, to carry out the program, and to provide feedback to the Title VII staff. As the program director summarized the process, an important feature was to have the objectives and decisions be those of the teachers--they were free to accept or reject any of them, but once accepted, theirs was the responsibility of using and building on them.

Process Evaluation

One of the key management strategies of the bilingual program was a comprehensive process evaluation which provided feedback on whether the program was being carried out as intended. Among the areas treated were the following.

Assessment of objectives for instructional procedures and outcomes. Checklists kept by the teachers were reviewed by the on-site evaluator, who also visited the classrooms periodically to observe the instructional processes and the progress of the children. The objectives in this area included procedural aspects such as the teacher's diagnosis of individual students, and grouping of children by performance level in each subject. Also included were outcomes such as accuracy in two-digit addition, recognizing time measurement concepts, or reading simple sentences in French. These objectives were assessed by teacher-made tests, with all data subject to review by the evaluator. He in turn reported results to the project director and made monthly written reports to teachers on the progress toward meeting the objectives for correct implementation of the curriculum.

Assessment of staff development objectives. These objectives dealt with such matters as establishment of open, efficient working relationships within the staff structure, preservice and inservice training activities, and participation of staff members in outside courses relevant to their program duties. Questionnaires, checklists, and interviews were used to evaluate their achievement.

Assessment of community involvement objectives. Among the objectives in this area were the formation and active participation of a parent advisory group, use of their suggestions by the project, parents volunteering as aides, and regular appearance of program news in local media. Evaluation was by questionnaires and observation.

Assessment of materials development objectives. These objectives had to do with establishing contacts with other programs and potential materials

sources, formation of materials development teams, production of materials, and extent of their use in program classrooms. Checklists, questionnaires, and observation were used.

In addition to feedback on the instructional process, this evaluation also provided information to be used in developing and refining the program in each succeeding year. The evaluation report included a formative aspect every year, and for each area evaluated there was a section called Commendations and Recommendations, designed to improve the development and implementation of the program during the next year. The final evaluation of cognitive achievement was also used to guide program growth, as for example in the case of the French curriculum. One of the initial premises of the staff was that the commercial materials used in the regular curriculum seemed to have shortcomings in teaching certain things because they referred to situations totally unfamiliar to the students. The French curriculum was used partly to remedy this. If the students' test results showed that they were weak in a certain basic area of math, for instance, that topic would be stressed the next year in the French component. For this reason, some objectives were revised annually during the first 4 years on the basis of test results.

INSTRUCTION

Language of Instruction

Since the bilingual program supplemented the regular program, no effort was made to divide the curriculum into portions that would be covered half in English and half in French. With the introduction of the French curriculum, however, there were objectives related to the use of French in the classroom and encouragement of a positive attitude toward French as well as toward English. Among these objectives were that the teacher should provide daily opportunity for discussion in French, that she should not discourage the children's use of their patois French, that students should feel comfortable with French in the classroom as demonstrated by willingness to participate in the class discussions, and that they should achieve standard expression and pronunciation.

The bilingual program also introduced a supplementary English curriculum. The new elements here were primarily a greater emphasis on speaking and vocabulary building, together with a student activity-centered approach which was characteristic of the entire bilingual program. Overall, about two-thirds of the instruction was in English, one-third in French.

The French Curriculum

The content of the French curriculum reflected two premises: that the French language was not in itself the goal of program instruction, but should act as a medium for the learning that students needed; and that the local cultural background could be used to help make content more relevant and understandable to the children.

The curriculum was based on the concept of student task performance leading to achievement of the objectives which supplemented the regular curriculum content. For each objective, instructional activities were designed to focus upon individualized learning rather than upon the instructor's teaching. Development of the curriculum began with the program's first year and was carried out by the teachers in cooperation with the curriculum coordinator and the French consultant. They developed the objectives and selected the tasks based on test results, their observations of their students, examination of the current literature, and consultation with outside specialists and each other during inservice programs.

The bilingual program used a syllabus filing system in which the teachers had a folder for each objective. It included a list of suggested materials in the classroom which could be used in connection with that objective, followed

by the suggested activities. (For an example, see the excerpt from the French curriculum guide which appears on the following pages. An English translation has been provided.)

The teachers, based on their own experience, reading, or suggestions, added new materials and activities to the list for each objective. Particularly effective ideas were shared with other teachers and incorporated into the curriculum. The decision of which activities to use to meet a particular objective, however, was left to the individual teacher. Every objectives folder also contained a student performance evaluation sheet to be used by the teacher in recording each student's achievement of the objective.

In addition to the objectives, the French curriculum included a series of program-developed books which were available for teachers to use. These are described in the section entitled Key Materials in this chapter.

Excerpt from the French Curriculum Guide

L'objectif de comportement en mathématiques à la Cinquième Année

Objectif: Comparaison en graphique
A la fin de l'année, l'élève pourra comparer un paysage naturel ou humain avec un autre qui a rapport à l'étude de l'Amérique du Nord de telle sorte qu'étant donné les statistiques d'un phénomène (économique ou social), il pourra le comparer avec un autre phénomène semblable en graphique. (Trois cas différents).

Activités suggérées

Activité #1

Le professeur écrit au tableau ou sur un transparent un certain nombre de statistiques comme les suivantes:

Behavioral Objective in Mathematics for the Fifth Year

Objective: Graphic comparison
At the end of the year the student will be able to compare two sets of statistics which relate to a study of North America so that given statistics of a phenomenon (economic or social), he will be able to compare it with another similar phenomenon using graphs. (Three different cases.)

Suggested Activities

Activity #1

The teacher writes on the board or on a transparency a certain number of statistics like the following:

La Nouvelle-Angleterre (New England)

NOM DE L'ETAT (Name of State)	LA POPULATION (Population)
Connecticut	2,875,000
Maine	989,000
Massachusetts	5,383,000
New Hampshire	681,000
Rhode Island	898,000
Vermont	405,000

Source: Nouveau Petit Larousse, 1968.

L'élève doit observer que le tableau:

a) décrit un phénomène c'est-à-dire la population;

b) compare la population d'un état avec celle des autres;

c) définit les états comme étant ceux de la Nouvelle-Angleterre;

d) donne la source des renseignements.

D'après ce modèle, l'élève doit imiter le format du tableau. Il choisit une région géographique pour son enquête comme:

a) les provinces du Canada;

b) les six plus grandes villes de l'Amérique du Nord;

c) les six plus grandes villes dans l'état du Maine.

The student must be able to observe that the table:

a) describes a phenomenon, i.e., population;

b) compares the population of one state with that of the others;

c) defines the states as those of New England;

d) gives the source of the information.

Using this model, the student must imitate the format of the table. He chooses a geographic region for his study, such as:

a) the provinces of Canada;

b) the six largest cities of North America;

c) the six largest cities in the state of Maine.

Activité #2

L'élève reçoit une feuille sur laquelle est polycopié un graphique semblable au suivant:

Activity #2

The student receives a sheet with a copy of a graph similar to the one following:

ETATS (States)	0	½	1	½	2	½	3	½	4	½	5	½	6
Connecticut													
Maine													
Massachusetts													
New Hampshire													
Rhode Island													
Vermont													

Servez-vous des statistiques données sur le transparent étudié hier. Tracez une ligne commençant à 0 à travers chaque état au point qui indique la population de l'état.	Use the statistics indicated on the transparency studied yesterday. Plot the statistics starting at 0 for each state to indicate the population of the state.
Le professeur aide l'élève à accomplir la tâche indiquée. Ensuite, se servant des statistiques dans l'enquête des élèves (Activité #1), l'élève fait un graphique semblable à celui sur la feuille polycopiée.	The teacher helps the student accomplish the indicated task. Next, using the statistics in Activity #1, the student makes a graph similar to the one on the handout.
Le professeur donne les renseignements suivants.	The teacher gives the following directions.
Professeur: Je vous indique un secteur économique. Trouvez le secteur agricole.	Teacher: I am showing you an economic sector. Find the agricultural sector.
L'élève: (Il indique le secteur.)	Student: (He points out the sector.)
Professeur: Placez la silhouette du fermier sous les deux colonnes. Faites la même chose pour l'ouvrier et la secrétaire.	Teacher: Put the silhouette of the farmer under the two columns. Do the same thing for the worker and the secretary.
L'élève: (Il place les trois silhouettes sous les colonnes indiquées.)	Student: (He puts the three silhouettes under the columns indicated.)
Professeur: Maintenant, je vous indique un secteur, une date et une somme d'argent. Vous devez noircir la partie de la colonne entre ces trois points de repère comme ceci. (Le professeur donne les renseignements suivants: le fermier - 1970 - 4 billions). Vous voyez que je vais noircir l'espace entre ces trois points de repère. (Il noircit la partie de la colonne indiquée). Maintenant faites la même chose.	Teacher: Now, I am showing you a sector, a date and a sum of money. You should darken the part of the column between these three indicators like this. (The teacher gives the following information: the farmer - 1970 - 4 billion). You see that I am going to darken the space between these three indicators. (He darkens the part of the column indicated). Now, you do the same thing.

L'élève: (Il noircit la partie de la colonne indiquée.)

Professeur: Maintenant, je vous donne d'autres renseignements. Vous noircissez l'espace indiqué chaque fois.

le fermier - 1980 - 5 billions
l'ouvrier - 1970 - 4 billions
la secrétaire - 1970 - 3 billions
l'ouvrier - 1980 - 6 billions
la secrétaire - 1980 - 4 billions

Votre graphique devrait ressembler à celui-ci. (Le professeur montre à l'élève le graphique qu'il a préparé d'avance. L'élève vérifie son travail avec celui du professeur.)

L'élève devra faire plusieurs graphiques de ce genre.

Activité #3

L'élève lit pour le professeur des graphiques décrits dans certains textes de mathématiques comme dans, Eléments de mathématiques modernes, ps. 247-257. Le professeur peut aussi préparer des transparents pour les faire lire par l'élève.

Student: (He darkens the part of the column indicated.)

Teacher: Now I am going to give you some other information. You darken the space indicated each time.

the farmer - 1980 - 5 billion
the worker - 1970 - 4 billion
the secretary - 1970 - 3 billion
the worker - 1980 - 6 billion
the secretary - 1980 - 4 billion

Your graph should look like this one. (The teacher shows the student a graph which he has prepared in advance. The student checks his work against that of the teacher.)

The student should do many graphs of this kind.

Activity #3

The student reads for the teacher graphs described in certain passages of mathematics such as the one on pp. 247-257 in Eléments de mathématiques modernes. The teacher can also prepare some transparencies to be read by the student.

The English Curriculum

Students in the bilingual program received the regular English curriculum of their district, and incorporated with it they had a supplementary English curriculum developed by the Title VII staff. This approach was used because educators and parents felt strongly that the English curriculum should not suffer, but rather that bilingual education should be a way of improving English instruction as well as introducing French instruction. Furthermore, each district had its own program in English, and it was decided that developmental efforts should be focused on the new French component first, and subsequently on ways of supplementing and strengthening English instruction without the need to remove their current program.

Supplementary language skills materials. In the regular English curriculum the emphasis had been primarily on reading. The Title VII program developers believed that bilingual students needed special attention in the areas of comprehension and expression, which could not be taken for granted while concentrating on the mechanics of reading. Therefore, the supplementary English curriculum provided objectives and activities that helped teachers to incorporate specific instruction in listening, speaking, and writing. Although the time given to English language skills was not significantly increased, the focus was shifted to emphasize these three skills as well as reading skills.

Reading--Each district used a basal reading series, which the Title VII project maintained. Because it was felt that no one approach could meet the needs of more than 80 percent of the students, the program introduced various supplemental materials. To supplement the linguistic readers, materials reinforcing phonics were selected, such as word games, language master series, Continuous Progress Reading Lab, and Perceptive Reading Program (Eyegate). Examples of supplemental materials selected by teachers and provided by the program to classes having a basically phonetic approach were Ginn readiness kits, Economy readiness kits, an encyclopedia, and paperback library books. The curriculum coordinator was available to the teaching staff as a reading consultant and administered individualized reading tests to students to help diagnose and prescribe which materials and approaches would be most successful in helping a student in reading.

Listening--For those students who demonstrated weakness in listening skills, the Follett Sound-Order-Sense Program was introduced. This program consisted of spoken and recorded activities for students to perform. The Peabody Language Development Program and a series of phonograph records and library books were also used. Sounds of Language Readers (Holt, Rinehart and Winston) were provided for the fourth grade; this material was based on the premise that a reading selection should be

taught as a total linguistic experience from which children can analyze language and verbalize their understanding of how it works.

Speaking--Spoken language was taught primarily through a question-answer approach. The Title VII staff encouraged teachers to emphasize student involvement in oral language discussions and the development of student-centered classrooms. Teachers were given the opportunity to visit classes in other school systems where a more active student participation existed. They were also encouraged to attend conferences, workshops, and institutes aimed at understanding and implementing student-centered activities.

The James Moffett Student-Centered Language Arts Curriculum became the base of the oral language program in grades K through 4. At least one inservice workshop session a year dealt with the philosophy of the Moffett Program which used a very active student-based approach to oral language, including creative dramatics and small-group improvisation.

Oral language development included the students' organizing and participating in group discussions. The discussions were evaluated by the curriculum coordinator on a 5-point checklist. The checklist determined the degree to which students understood the discussion, contributed to it, listened, made relevant comments, and were able to summarize the discussion.

Writing--Little emphasis on creative writing was present in the classes when the project began, and teachers were encouraged to plan more such activities. Certain commercial materials, such as the SRA Newslab and Red Midnight (unfinished stories), were purchased to aid teachers to develop creative writing skills of the students. Written activities were added to the kindergarten curriculum through dictation, for example, having the students dictate a story to explain drawings shown to them by the teacher. The same type of activity continued in grade 1 with greater emphasis on the language experience approach. In grade 2, students were encouraged to begin creative writing. In many classes, students composed their own storybooks and shared them with their peers. In grades 2, 3, and 4, student writings were kept on file and examined periodically by the evaluator or curriculum coordinator. In order to motivate creative writing, selected student writings were compiled and published annually.

In addition to creative writing activities, a series of formal language experiences were specified, e.g., letter writing, dictionary skills, punctuation and capitalization rules, usage, and spelling.

Supplementary activities in English. The English curriculum of the bilingual program, like the French one, was based on a student-centered approach, and included objectives with suggestions for activities to be used in the classroom. There was also the use of the local background in instruction.

For example, an activity suggested for a listening skills/oral comprehension objective involved a game based on directions. The game went as follows: The teacher or a pupil gave directions to a place in the community, starting from the school building. The children had to identify the place where they would arrive by following the directions. The vocabulary used in the activities was listed so that terminology would not be taken for granted by teachers. In the directions game activity, for example, vocabulary words included directional terms such as north, east, south, west, and names of particular places in the community such as streets, churches, schools, stores, and factories or mills.

Development of the English curriculum was a cooperative enterprise of the teachers and the curriculum coordinator. Teachers had jotted down their own successful projects (such as the directions game described above) to be shared with all program staff, and during the program's fourth year, a team of volunteer teachers and the curriculum coordinator worked together to compile the 475-page, two-volume curriculum supplement of English activities in language arts, mathematics, science, and social studies. Because many of the classrooms in the three districts were ungraded, the activities were written on levels of difficulty rather than grade levels. For example, Level A, the first level of difficulty, was intended for children 5 to 6 years old, Level B for those 6 to 7 years old, etc. For each level in language arts, objectives and activities were grouped into five areas: oral activities, aural activities, written activities, dramatic activities, and reading activities. In math, science, and social studies, activities were grouped only by level and subject. The contributing teachers often passed on practical hints for the activities in the curriculum guide as well, e.g., "children may tire and lose interest if the game is played too often." Development of the English curriculum was intended to be ongoing, with teachers continuing to contribute activities throughout the life of the project.

Grouping

Operating in three separate districts, the bilingual program reflected the variety of their traditions, innovations, and preferences in classroom organization and grouping practices. There were some classrooms in which children worked individually or in small groups at various centers, other classrooms in which they sat at desks in rows. All project classes had one thing in common: children were individually evaluated by the teacher on their

performance of the objectives, and they were grouped for instruction according to their achievement levels and needs. This, and the bilingual program's emphasis on student activity-centered learning had some influence in shifting most of the classroom grouping patterns toward individual and small-group activities, with some large-group activities. Teachers remained free, however, to use the system that fit best with the needs of their children and with their own teaching style.

Diagnosis and Assessment

For each of the program objectives, teachers evaluated the students individually at the beginning of the year. Diagnosis was formal or informal depending on the objective. For example, the Michigan Oral Language Production test was used during the first year, and the Spache Diagnostic Reading Scales were administered to students who were referred by their classroom teachers for further diagnosis. Most commonly, however, informal diagnostic procedures were devised by the teachers with the help and guidance of the project evaluator to ensure congruency.

Based on these evaluations, students were grouped for instruction in each content area. Assessment of student achievement was measured by the means specified by each objective, either standardized test scores, teacher ratings and observer checklists, or local paper and pencil tests. For example, a second-grade objective stated that students should be able to read orally the short vowel sounds, long vowel sounds, and the dipthongs *oi*, *oy*, *ou*, and *ow*. Those students who met the objective participated in other activities; those who did not achieve the stated criterion would receive instruction and practice in that particular area. They were then re-evaluated, and depending on their achievement, the teacher either altered the method of teaching and retaught the skill, or allowed the student to proceed into instruction directed toward another objective.

In the English curriculum, continuous assessment was carried out in the normal manner of each district, using teacher-made tests or tests supplied by the publishers of the commercial curriculum materials. Other English objectives of the bilingual program were evaluated by criterion-referenced tests or teacher observation; for example, a kindergarten objective stating that "students will be able to identify verbally (in English) and to reproduce basic geometric figures (squares, circles, triangles) and types of lines (curved and straight)." Final evaluation of achievement for bilingual program students in English was also measured by performance on individual subtests of a standardized test in English. For example, 60 percent of the students were expected to have the mathematics skills needed to meet the national norms on the Metropolitan Achievement Test.

In the French curriculum, achievement of objectives was assessed by criterion-referenced tests and teachers' observations. In addition to the record of student performance that was kept in the folder for each objective, some teachers used a large chart posted on the wall to keep track of student progress. This chart listed all the objectives and the names of the students, and by marking the appropriate space each time a student completed an objective, the teacher had a comprehensive, quick-reference checklist for the entire class.

An important aid to the teachers in assessing student performance was the work of the program's evaluator, who visited all classrooms periodically. He observed the teachers' testing procedures and talked with each one about the objectives and their assessment. These continuing visits were essential in maintaining the uniformity of the objectives and evaluative procedures across all schools in the three districts. At the same time, they provided feedback from the classroom teachers to the Title VII staff on the usefulness and appropriateness of the objectives and the assessment methods.

Typical Schedule

Since students were grouped for instruction according to their achievement levels and their needs, rather than simply by language dominance, the typical schedule and the ratio of French and English instruction was generally applicable to all students. A typical schedule is shown on the next page.

Facilities and Equipment

The facilities used by the program varied across the three school districts. Some of the schools were quite old, some more recently built. Some of the classrooms were the traditional self-contained type; in others, walls had been removed to form large open classrooms. In some of the self-contained rooms, the furniture had been arranged to form different learning centers; in others, the desks were in rows. Generally it can be said that the program can operate in any type of classroom. It requires no special modifications, nor does it prohibit them.

As a result of the Title VII funding, the classrooms were equipped with new audiovisual devices intended to help the teachers follow the program's emphasis on individualized, student-centered learning by freeing them to work more with individual children or small groups. While some students worked with the teacher or aide, others could use equipment such as the language master (for which the program teachers and staff developed special series of cards in French and English), earphones and listening station, filmstrip, projector, cassette tape recorder, typewriter, and overhead projectors.

Suggested Schedule for the Week

	Monday	Tuesday	Wednesday	Thursday	Friday
8:30 - 9:00	PROGRAM IN ENGLISH				
9:00 - 9:30		Math in French	Music in French	Math in French	
9:30 - 9:50	Recess				
9:50 - 10:30	PROGRAM IN ENGLISH				
10:30 - 11:15	Language Skills in French	Art in French	Language Skills in French	Art in French	Language Skills in French
	LUNCH				
12:45 - 1:15	Social Studies in French	Social Studies in French	Social Studies in French	Social Studies in French	Social Studies in French
1:15 - 1:50	PROGRAM IN ENGLISH				
1:30 - 1:50	Recess				
1:50 - 2:45	PROGRAM IN ENGLISH				

Key Materials

Although the objectives and the evaluation procedures were uniform across all bilingual classrooms, there were no materials that all teachers were required to use. The freedom left to teachers in the use of instructional methods and materials was cited by program staff as one of the sources of the voluntary cooperation which the program enjoyed from the beginning. The teachers participated in the selection of materials, however, and those that were purchased for the bilingual program had almost universal use.

Since the English curriculum of each district was not altered by the bilingual program, the materials varied from one to another. Although a complete listing is impractical, some of those central to the English curriculum in each district are listed below.

	Madawaska	S.A.D. #24	S.A.D. #33
Language Arts	Moffet Interaction Series (Houghton Mifflin)	Moffet Interaction Series (Houghton Mifflin)	Moffet Interaction Series (Houghton Mifflin)
	English for Meaning (Houghton Mifflin)	Palo Alto Reading Program (Harcourt Brace Jovanovich)	English for Meaning (Houghton Mifflin)
	Reading 360 (Ginn & Co.)		Peabody Language Development Kit (American Guidance Service)
	Sheldon Basic Reading Series (Allyn & Bacon, Inc.)		Continuous Progress in Spelling (Economy Co.)
			Jacaranda Individualized Language Arts Program (Jacaranda Co.)
Mathematics	Elementary School Mathematics (Addison-Wesley)	Individual Progress Instruction (Appleton-Century-Crofts)	Elementary School Mathematics (Addison-Wesley)

(Continued)

	Madawaska	S.A.D. #24	S.A.D. #33
Social Studies	Holt Databank System for Elementary Social Studies (Holt, Rinehart & Winston)	Holt Databank System for Elementary Social Studies (Holt, Rinehart & Winston)	Laidlaw Social Science Program (Laidlaw)
Science	Heath Science Series (D.C. Heath) Modular Activities Program in Science (Houghton Mifflin)	Elementary Science Study Program (McGraw-Hill)	Modern Science (Laidlaw)

The French curriculum materials, based on the students' cultural background, were planned during the first year of the program to follow a logical sequence over the elementary years. The concept behind this sequence was that because of their stable, somewhat isolated rural background, there were limits on the experiences of the students, which made some of the situations presented in commercial materials totally unfamiliar to them. The program staff felt that this left such materials with shortcomings for teaching these children in certain areas. The French materials were designed to build on strengths of the students' background and use them to overcome the limitations. Thus the focus of the French materials began with the child himself and expanded outward. At each grade level the topics, with corresponding books from the social studies curriculum, were as follows.

Grade Level	Topic	Titles
K-1	The child, his family, and friends	Histoire des Acadiens Discussion charts: "Les patates" "A la maison" "Mon village" "La cabane à sucre"

(Continued)

Grade Level	Topic	Titles
2	The town and local area	Chez Nous Ma Famille Chez Nous Ma Forêt Chez Nous Mon Village Histoire des Acadiens
3	The state of Maine and the Canadian province of New Brunswick across the river	Mon pays: Van Buren Mon pays: Frenchville et Ste. Agathe Mon pays: Madawaska Histoire des Acadiens
4	New England, Canada, and Louisiana (all homes of the Acadians)	Je Voyage en Nouvelle-Angleterre Je Voyage au Canada Je Voyage en Louisiane

Materials developed for grade 5 focused on the topic, The continent of North America, and included these titles:

L'Amérique du Nord: Ses Villes et sa Population

L'Amérique du Nord: Histoire et Géographie

L'Amérique du Nord: Son Economie et Ses Ressources

Materials for grade 6 will reflect a human-development emphasis, focusing on the various parts of the world where French is spoken.

In addition to the books for each grade level, other materials were developed to tie in with the above topics. For example, sets of slides were available showing aspects of life in the St. John Valley, including housing, construction, sports, businesses, and farming; these were for use with the third-grade theme. For fourth grade, there were slides on New England, Canada, and Louisiana. Additional materials developed for the program included language skills transparencies, a series of evaluation-oriented crossword puzzles, language master cards, educational games, videotaped series, cassette tape recordings, and short skits.

PARENT INVOLVEMENT AND COMMUNITY AWARENESS

Parent involvement and community awareness were considered essential from the earliest days of the program. This was particularly true because the bilingual program was not designed primarily as a language program, but rather to assist the community in meeting their linguistic, cultural, social, and economic needs for bilingual skills. It was felt that without parent and community support the program could not achieve its purpose.

The Community's Role

During the first year specific objectives were formulated, as they were in each year since, for the involvement of parents and community members in program planning and activities. There were also objectives for the development of community awareness through dissemination of information about the program. Each objective was evaluated in the yearly report. Among accomplishments the first year were the following:

- A community advisory group was formed, with five members from each district. It included French- and English-speaking people--businessmen, educators, parents, clergy, and high school students.
- The advisory group met monthly. They made three suggestions that were accepted and incorporated into the program.
- Articles about the program appeared each month in local newspapers, and staff members participated in two television discussions and one radio discussion about the bilingual program.
- Parent meetings and conferences were held with at least 50 percent of the parents attending at least one meeting.

Parent Participation

First-year objectives in this area were not accomplished. These included having parents volunteer as aides and having at least 60 percent of them visit school twice a year. The evaluator recommended that greater efforts be made to encourage parents to participate in the program, and in subsequent years this was done. An active system of parent volunteering was established. Teachers contacted parents with requests for volunteer help in the classroom,

and by 1973-74, the program reported a total of 182 parents who had responded during that year. Parents also assisted in a 3-day field trip to central Maine for the fourth-grade students.

Parent involvement in all areas grew similarly over the years. Initially, some parents were fearful that their children would not receive a strong background in English, that the districts were instituting a French program only. They soon observed, however, that the English curriculum was not being weakened, and they liked the introduction of activities in French which brought important features of local life into the children's schooling. Since that time the parent's organization played an active role in getting the community involved in the program; for example, they helped to carry out a survey of community attitudes, and they helped with hosting visitors to the program.

Project Bulletin

One of the most important means of keeping parents and the community aware of and involved in the program's activities was the monthly news bulletin issued throughout the school year. Staff members, teachers, parents, advisory group members, and people from the community contributed brief articles and letters with news or opinions on bilingual program activities. The bulletin's approach was that of a newsletter in a very close, family-like community, and it featured many pictures of the children at work in the classrooms and on field trips, or reproductions of children's artwork. It reflected school and community events throughout the changing seasons, and it reported each new project milestone, for example, completion of the English curriculum or of a new grade level in the series of French social studies books. The friendly, personal tone was promoted by having all contributions signed, and the bulletin was distributed to parents and community members in all three districts.

COSTS

Sources and Level of Funding

In 1973-74, the program received funds under Title VII totaling $175,085. This was the only source of funds.

Start-Up Costs

During the first year, 1970-71, the Title VII grant was for $150,000, to serve 400 students in grades K and 1. Since the bilingual program was supplementary to the regular one, the cost involved was only that of the new items being added onto the regular district expenditures for personnel, plant, materials, and equipment. The major items under each of these categories included the following:

- personnel, e.g., Title VII administrative and clerical staff, aides, inservice training;
- plant, e.g., rental of Title VII office space; and
- materials and equipment, e.g., new materials purchased or developed, new equipment added to classrooms.

The major start-up costs were for salaries of staff and aides ($82,350), inservice training and consultants ($20,000), and materials and equipment ($26,000).

Continuation Costs

Although the number of students served nearly doubled in the first 4 years, total expenditures increased by only 17 percent. The continuation funds covered basically the same kind of expenditures as in the start-up year--salaries, inservice training, and materials and equipment. Materials and equipment costs continued each year that the program added another grade level, since the new classrooms had to be equipped. Once a classroom was equipped, however, it was assumed that only a minor expense for new materials would be required for some years afterward. Similarly, training costs continued as long as the teachers of new grade levels were being added. Once all teachers are experienced in the bilingual program, these costs should also decrease somewhat.

Per-Pupil Costs

The per-pupil cost in the first year was $375. This represented the cost of the bilingual program over and above the regular per-pupil cost in the three districts, which for 1970-71 was $495 in S.A.D. #33, $465 in Madawaska, and $567 in S.A.D. #24.

The per-pupil cost in 1973-74 was $228. This was in addition to 1973-74 district per-pupil costs of $817, $637, and $726, respectively. One reason for the decrease in per-pupil cost of the bilingual program was that although the number of children served increased, the program administrative staff did not. Also, anticipating the end of Title VII funding at the end of the fifth year, the local districts began a move to continue the program by gradually picking up the salaries of the aides. The Title VII expense for aides reduced only somewhat, but many more aides are now employed. The major costs to the districts for continuing the program without outside funding would be the salaries of aides and administrative staff and the price of instructional materials.

EVALUATION

Design

The evaluation reports presented the results of standardized tests, and the attainment of product and process objectives from kindergarten to grade 4 in both French and English. The evaluators made three kinds of comparisons:

- gains from pretest to posttest,
- with national norms,
- with preset criteria of objectives,

and although no other comparison or control group was identified in the report, additional data allowed AIR to make some comparisons with the non-program students.

Measures

The new (1970) versions of the Metropolitan Achievement Tests have been used since the start of the program, for all grades except K, with all subtest scores being given. These were given with Form F as pretests in September, with the alternate Form G as a posttest in May. Other standardized and criterion-referenced tests were also used at certain schools or grade levels, including the SRA tests, which were applied throughout the Madawaska school district.

Results

Since of the standardized tests, only the Metropolitan was routinely applied in all districts, the main comparisons were restricted to this instrument. The following table presents results for students in the bilingual program for the years 1970-71 through 1973-74.

Table 1

Results in Stanines and Grade Equivalents on the Metropolitan Achievement Tests, for Total Reading and Total Mathematics by Grade Level and by Academic Year

Grade	Subject	1970-1971		1971-1972		1972-1973		1973-1974	
		Stanine	GE	Stanine	GE	Stanine	GE	Stanine	GE
K	Reading	-	-	6	-	7	-	7	-
	Mathematics	-	-	6	-	6	-	7	-
1.8	Reading	5	1.8	5	1.8	6	2.0	5	1.9
	Mathematics	5	1.9	5	1.8	5	1.8	5	1.9
2.8	Reading	-	-	5	2.6	5	2.8	6	3.1
	Mathematics	-	-	4	2.5	6	3.0	7	3.3
3.8	Reading	-	-	-	-	4	3.1	5	3.5
	Mathematics	-	-	-	-	5	3.8	6	4.2
4.8	Reading	-	-	-	-	-	-	5	4.3
	Mathematics	-	-	-	-	-	-	5	4.7

Comparisons between Title VII and non-Title VII pupils were also made possible with additional data furnished to AIR by two of the individual districts. For Madawaska, results of SRA tests applied in October 1974 to both Title VII and regular classes are shown in Table 2.

Table 2

SRA Grade Equivalents for Title VII and Regular Classes, Grades 2, 3, and 4

Grade Placement	Subject	Title VII Mean*	Title VII SD*	Regular Classes Mean*	Regular Classes SD*
2.2	Reading	2.4	1.2	1.9	0.6
	Language Arts	2.6	1.2	2.0	0.4
	Math	2.6	0.7	2.1	0.7
3.2	Reading	3.7	1.0	3.0	1.0
	Language Arts	3.9	1.3	3.1	0.7
	Math	3.4	1.2	2.9	0.7
4.2	Reading	4.7	1.3	4.0	1.0
	Language Arts	5.0	1.6	4.3	1.2
	Math	4.6	0.9	4.1	1.0

*These values have been derived from quartiles and medians, and are approximate.

S.A.D. #24 used the Metropolitan series of tests throughout the schools. Besides Title VII, they also had the Follow Through program, but were able to supply the following data for these subgroupings and for two grades.

Table 3

Mean Grade Equivalents on MAT for Grades 1 and 2 with Subgroupings, for May 1974

Grade Placement	Subject	Title VII Follow Through	(N)	Title VII NFT*	(N)	Non-Title VII Follow Through	(N)	Non-Title VII NFT*	(N)
1.8	Reading	1.6	(22)	2.0	(21)	1.3	(42)	1.5	(18)
	Mathematics	1.5	(22)	2.0	(21)	1.2	(42)	1.3	(18)
2.8	Reading	2.7	(21)	3.5	(12)	1.9	(46)	2.2	(37)
	Mathematics	2.9	(21)	3.3	(12)	1.9	(46)	2.0	(37)

*non-Follow Through

Interpretation

In Table 1 (all Title VII students), following single groups (i.e., reading diagonally downward), the results for each successive group get better, suggesting that the program may be refining its techniques and improving its achievements over time.

In Table 2 (Madawaska), again the Title VII students are sometimes a trifle behind grade placement in their average achievement, though there are no cumulative losses. They are far ahead of the regular classes in every case.

In Table 3 (Van Buren), the superiority of the Title VII students is patent; the lower of their subgroups (Follow Through) have higher performances than the better of the non-Title VII subgroups (non-Follow Through).

SOURCES FOR FURTHER INFORMATION

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